

Author Index — volumes 43–46

- Aanesen, R.T., see Stabell, O.B. (44) 279
- Adams, S.M. and Shorey, C.D., Energy dispersive spectroscopy of granular concretions in the mantle of the freshwater mussel *Hyridella depressa* from Lake Burragorang as a technique to monitor metals in aquatic systems (44) 93
- Adams, S.M., see Nadig, S.G. (43) 163
- Adolfsson-Erici, M., see Larsson, D.G.J. (45) 91
- Ahokas, J.T., see van Dam, R.A. (46) 191
- Amade, P. and Lemée, R., Chemical defence of the mediterranean alga *Caulerpa taxifolia*: variations in caulerpenyne production (43) 287
- Andersen, B.W., see Bjerregaard, P. (45) 171
- Arbogast, D.N., see Thorgaard, G.H. (46) 121
- Arsac, F., see Lucan-Bouché, M.-L. (45) 9
- Baden, D.G., see Trainer, V.L. (46) 139
- Baden, S.P., Eriksson, S.P. and Gerhardt, L., Accumulation and elimination kinetics of manganese from different tissues of the Norway lobster *Nephrops norvegicus* (L.) (46) 127
- Bailey, G.S., see Thorgaard, G.H. (46) 121
- Baillieul, M. and Blust, R., Analysis of the swimming velocity of cadmium-stressed *Daphnia magna* (44) 245
- Bainy, A.C.D., Woodin, B.R. and Stegeman, J.J., Elevated levels of multiple cytochrome P450 forms in tilapia from Billings Reservoir-São Paulo, Brazil (44) 289
- Balch, G.C. and Evans, R.D., A recirculating flow-through system for toxicity testing with stream-dwelling aquatic benthic invertebrates (45) 241
- Balk, L., see Ericson, G. (45) 181
- Barbara Bauer, see Oehlmann, J. (43) 239
- Barber, J.T., Thomas, D.A., Yatsu, L.Y. and En-sley, H.E., The physiological consequences of ethylene glycol-induced changes in the frond structure of *Lemna gibba* (45) 253
- Baron, C.L., see Palace, V.P. (43) 195
- Barron, M.G., Podrabsky, T., Ogle, S. and Ricker, R.W., Are aromatic hydrocarbons the primary determinant of petroleum toxicity to aquatic organisms? (46) 253
- Barry, M.J., see van Dam, R.A. (46) 191
- Bearden, A.P., Sinks, G.D. and Schultz, T.W., Acclimation to sublethal exposures to a model nonpolar narcotic: population growth kinetics and membrane lipid alterations in *Tetrahymena pyriformis* (46) 11
- Behra, R., see Knauer, K. (46) 221
- Bembo, D.G., see Miller, H.C. (44) 183
- Benson, W.H., see Nimrod, A.C. (44) 141
- Bentivegna, C.S. and Piatkowski, T., Effects of tributyltin on medaka (*Oryzias latipes*) embryos at different stages of development (44) 117
- Berg, A.H., see Larsson, D.G.J. (45) 91
- Bergman, H.L., see Marr, J.C.A. (43) 225
- Berntssen, M.H.G., Hylland, K., Wendelaar Bonga, S.E. and Maage, A., Toxic levels of dietary copper in Atlantic salmon (*Salmo salar* L.) parr (46) 87
- Biagianti-Risbourg, S., see Lucan-Bouché, M.-L. (45) 9
- Bjerregaard, P., Andersen, B.W. and Rankin, J.C., Retention of methyl mercury and inorganic mercury in rainbow trout *Oncorhynchus mykiss* (W): effect of dietary selenium (45) 171
- Bjerregaard, P., see Christensen, L.J. (46) 211
- Blaise, C., see Gagné, F. (44) 83
- Blanck, H., see Nyström, B. (43) 25
- Blust, R., see Baillieul, M. (44) 245
- Bodega, G., see Hernández, C. (45) 195
- Boermans, H.J., see Karrow, N.A. (45) 223
- Bogdanova, A.Y. and Nikinmaa, M., Dehydroabi-etic acid, a major effluent component of paper and pulp industry, decreases erythrocyte pH in lamprey (*Lampetra fluviatilis*) (43) 111
- Bols, N.C., see Clemons, J.H. (43) 179; Karrow, N.A. (45) 223
- Boudou, A., see Inza, B. (43) 273
- Bowmer, T., Gimeno, S. (43) 77; see Gimeno, S. (43) 93

- Bradbury, S.P., see Carlson, R.W. (43) 51;
Kolanczyk, R. (45) 47
- Bravo, I., Reyero, M.I., Cacho, E. and Franco, J.M., Paralytic shellfish poisoning in *Haliotis tuberculata* from the Galician coast: geographical distribution, toxicity by lengths and parts of the mollusc (46) 79
- Brown, S.B., see Palace, V.P. (43) 195
- Burkow, I.C., see Wolkers, J. (44) 103
- Bye, B.E., see Jørgensen, E.H. (44) 233
- Cacela, D., see Marr, J.C.A. (43) 225
- Cacho, E., see Bravo, I. (46) 79
- Campbell, H.A., Handy, R.D. and Nimmo, M., Copper uptake kinetics across the gills of rainbow trout (*Oncorhynchus mykiss*) measured using an improved isolated perfused head technique (46) 177
- Canesi, L., Viarengo, A., Leonzio, C., Filippelli, M. and Gallo, G., Heavy metals and glutathione metabolism in mussel tissues (46) 67
- Carissan, F.M.M., see Pipe, R.K. (46) 43
- Carlson, R.W., Bradbury, S.P., Drummond, R.A. and Hammermeister, D.E., Neurological effects on startle response and escape from predation by medaka exposed to organic chemicals (43) 51
- Carrasquero-Verde, J.R., Role of associated bacteria in *Heterosigma carterae* toxicity to salmonids (45) 19
- Cecchine, G., see Preston, B.L. (44) 201
- Charest, P.-M., see Munger, C. (44) 195
- Cheng, S.-Y. and Chen, J.-C., Effects of nitrite exposure on the hemolymph electrolyte, respiratory protein and free amino acid levels and water content of *Penaeus japonicus* (44) 129
- Cheng, S.-Y. and Chen, J.-C., Hemocyanin oxygen affinity, and the fractionation of oxyhemocyanin and deoxyhemocyanin for *Penaeus monodon* exposed to elevated nitrite (45) 35
- Chen, J.-C., Cheng, S.-Y. (44) 129; see Cheng, S.-Y. (45) 35
- Chordas, S.W., III, see Fisher, S.W. (45) 115
- Christensen, L.J., Korsgaard, B. and Bjerregaard, P., The effect of 4-nonylphenol on the synthesis of vitellogenin in the flounder *Platichthys flesus* (46) 211
- Clemons, J.H., Myers, C.R., Lee, L.E.J., Dixon, D.G. and Bols, N.C., Induction of cytochrome P4501A by binary mixtures of polychlorinated biphenyls (PCBs) and 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) in liver cell lines from rat and trout (43) 179
- Coles, J.A., see Pipe, R.K. (46) 43
- Collier, T.K., see Gallagher, E.P. (44) 171
- Conradi, M. and Depledge, M.H., Population responses of the marine amphipod *Corophium volutator* (Pallas, 1766) to copper (44) 31
- Cooke, J.B. and Hinton, D.E., Promotion by 17 β -estradiol and β -hexachlorocyclohexane of hepatocellular tumors in medaka, *Oryzias latipes* (45) 127
- Couillard, C.M., Williams, P.J., Courtenay, S.C. and Rawn, G.P., Histopathological evaluation of Atlantic tomcod (*Microgadus tomcod*) collected at estuarine sites receiving pulp and paper mill effluent (44) 263
- Courtenay, S.C., see Couillard, C.M. (44) 263
- Craig, A., Hare, L. and Tessier, A., Experimental evidence for cadmium uptake via calcium channels in the aquatic insect *Chironomus staegeri* (44) 255
- Craig, A., see Munger, C. (44) 195
- Cymbalisty, C.D., see Fisk, A.T. (43) 209
- Dahle, S., see Wolkers, J. (44) 103
- de Groene, E.M., see Wolkers, J. (44) 103
- DeLorenzo, M.E., Lauth, J., Pennington, P.L., Scott, G.I. and Ross, P.E., Atrazine effects on the microbial food web in tidal creek mesocosms (46) 241
- Depledge, M.H., see Conradi, M. (44) 31
- Di Giulio, R.T., see Ploch, S.A. (46) 231
- Dixon, D.G., see Clemons, J.H. (43) 179; Karrow, N.A. (45) 223
- Donkin, M.E., see Scarlett, A. (45) 159
- Donkin, P., see Scarlett, A. (45) 159
- Drummond, R.A., see Carlson, R.W. (43) 51
- Eaton, D.L., see Gallagher, E.P. (44) 171
- Eilertsen, H.C., see Stabell, O.B. (44) 279
- Elbl, T., see Theodorakis, C.W. (45) 279
- Elskus, A.A., Monosson, E., McElroy, A.E., Stegeman, J.J. and Woltering, D.S., Altered CYP1A expression in *Fundulus heteroclitus* adults and larvae: a sign of pollutant resistance? (45) 99
- Ensley, H.E., see Barber, J.T. (45) 253
- Ericson, G., Liewenborg, B., Lindesjö, E., Näf, C. and Balk, L., DNA adducts in perch (*Perca fluviatilis*) from a creosote contaminated site in the River Ångermanälven, Sweden (45) 181
- Eriksson, J.E., see Råbergh, C.M.I. (46) 55
- Eriksson, S.P., see Baden, S.P. (46) 127
- Evans, C.W., see Miller, H.C. (44) 183
- Evans, R.D., see Balch, G.C. (45) 241
- Evans, S.V., see Scarlett, A. (45) 159

- Fedorov, K.E., see Zelennikov, O.V. (46) 33
 Fernández, B., see Hernández, C. (45) 195
 Fileman, T.W., see Scarlett, A. (45) 159
 Filippelli, M., see Canesi, L. (46) 67
 Fisher, S.W., Chordas, S.W., III and Landrum, P.F., Lethal and sublethal body residues for PCB intoxication in the oligochaete, *Lumbriculus variegatus* (45) 115
 Fisk, A.T., Cymbalisty, C.D., Tomy, G.T. and Muir, D.C.G., Dietary accumulation and depuration of individual C₁₀-, C₁₁- and C₁₄-polychlorinated alkanes by juvenile rainbow trout (*Oncorhynchus mykiss*) (43) 209
 Fitzsimons, J., see Palace, V.P. (43) 195
 Flik, G., see Li, J. (43) 1
 Förlin, L., see Larsson, D.G.J. (45) 91
 Franchet, C., Goudeau, M. and Goudeau, H., Tributyltin impedes early sperm-egg interactions at the egg coat level in the ascidian *Phallusia mammillata* but does not prevent sperm-egg fusion in naked eggs (44) 213
 Franco, J.M., see Bravo, I. (46) 79

 Gagné, F. and Blaise, C., Estrogenic properties of municipal and industrial wastewaters evaluated with a rapid and sensitive chemoluminescent in situ hybridization assay (CISH) in rainbow trout hepatocytes (44) 83
 Gallagher, E.P., Sheehy, K.M., Janssen, P.L., Eaton, D.L. and Collier, T.K., Isolation and cloning of homologous glutathione S-transferase cDNAs from English sole and starry flounder liver (44) 171
 Gallo, G., see Canesi, L. (46) 67
 George, S.G., see Pathiratne, A. (43) 261
 Gerhardt, L., see Baden, S.P. (46) 127
 Gerritsen, A.G.M., see Gimeno, S. (43) 77
 Gimeno, S., Komen, H., Gerritsen, A.G.M. and Bowmer, T., Feminisation of young males of the common carp, *Cyprinus carpio*, exposed to 4-tert-pentylphenol during sexual differentiation (43) 77
 Gimeno, S., Komen, H., Jobling, S., Sumpter, J. and Bowmer, T., Demasculinisation of sexually mature male common carp, *Cyprinus carpio*, exposed to 4-tert-pentylphenol during spermatogenesis (43) 93
 Goudeau, H., see Franchet, C. (44) 213
 Goudeau, M., see Franchet, C. (44) 213
 Gray, M.A. and Metcalfe, C.D., Toxicity of 4-tert-octylphenol to early life stages of Japanese medaka (*Oryzias latipes*) (46) 149

 Hahn, M.E., see Huuskonen, S.E. (44) 47
 Haitzer, M., Höss, S., Traunsperger, W. and Steinberg, C., Relationship between concentration of dissolved organic matter (DOM) and the effect of DOM on the bioconcentration of benzo[a]pyrene (45) 147
 Hammermeister, D.E., see Carlson, R.W. (43) 51
 Handy, R.D., see Campbell, H.A. (46) 177
 Hansen, J.A., see Marr, J.C.A. (43) 225
 Hare, L., see Craig, A. (44) 255; Munger, C. (44) 195
 Helle, E., see Mattson, M. (43) 41
 Hemond, H., see Knauer, K. (46) 221
 Hendricks, J.D., see Thorgaard, G.H. (46) 121
 Hermens, J.L.M., see Urrestarazu Ramos, E. (46) 1
 Hernández, C., Martín, M., Bodega, G., Suárez, I., Pérez, J. and Fernández, B., Response of carp central nervous system to hyperammonemic conditions: an immunocytochemical study of glutamine synthetase (GS), glial fibrillary acidic protein (GFAP) and 70 kDa heat-shock protein (HSP70) (45) 195
 Hinton, D.E., see Cooke, J.B. (45) 127
 Hoffman, A.D., see McKim, J.M. (45) 265
 Holdway, D.A., see van Dam, R.A. (46) 191
 Hollis, L., McGeer, J.C., McDonald, D.G. and Wood, C.M., Cadmium accumulation, gill Cd binding, acclimation, and physiological effects during long term sublethal Cd exposure in rainbow trout (46) 101
 Honey, S.A., see Yuan, Z.-X. (45) 1
 Hontella, A., see Karrow, N.A. (45) 223
 Höss, S., see Haitzer, M. (45) 147
 Huuskonen, S.E., Ristola, T.E., Tuvikene, A., Hahn, M.E., Kukkonen, J.V.K. and Lindström-Seppä, P., Comparison of two bioassays, a fish liver cell line (PLHC-1) and a midge (*Chironomus riparius*), in monitoring freshwater sediments (44) 47
 Hylland, K., see Berntssen, M.H.G. (46) 87

 Inza, B., Ribeyre, F. and Boudou, A., Dynamics of cadmium and mercury compounds (inorganic mercury or methylmercury): uptake and depuration in *Corbicula fluminea*. Effects of temperature and pH (43) 273
 Isomaa, B., see Råbergh, C.M.I. (46) 55; Sandbacka, M. (46) 23

 Janssen, P.L., see Gallagher, E.P. (44) 171
 Jobling, M., see Jørgensen, E.H. (44) 233
 Jobling, S., see Gimeno, S. (43) 93

- Jørgensen, E.H., Bye, B.E. and Jobling, M., Influence of nutritional status on biomarker responses to PCB in the Arctic charr (*Salvelinus alpinus*) (44) 233
- Karrow, N.A., Boermans, H.J., Dixon, D.G., Hontella, A., Solomon, K.R., Whyte, J.J. and Bols, N.C., Characterizing the immunotoxicity of creosote to rainbow trout (*Oncorhynchus mykiss*): a microcosm study (45) 223
- Klaverkamp, J.F., see Palace, V.P. (43) 195
- Knauer, K., Behra, R. and Hemond, H., Toxicity of inorganic and methylated arsenic to algal communities from lakes along an arsenic contamination gradient (46) 221
- Knudsen, F.R. and Pottinger, T.G., Interaction of endocrine disrupting chemicals, singly and in combination, with estrogen-, androgen-, and corticosteroid-binding sites in rainbow trout (*Oncorhynchus mykiss*) (44) 159
- Kolanczyk, R.C., see McKim, J.M. (45) 265
- Kolanczyk, R., Schmieder, P., Bradbury, S. and Spizzo, T., Biotransformation of 4-methoxyphenol in rainbow trout (*Oncorhynchus mykiss*) hepatic microsomes (45) 47
- Komen, H., see Gimeno, S. (43) 93; Gimeno, S. (43) 77
- Korsgaard, B., see Christensen, L.J. (46) 211
- Krone, C.A. and Stein, J.E., Species dependent biotransformation and tissue distribution of tributyltin in two marine teleosts (45) 209
- Kukkonen, J.V.K., see Huuskonen, S.E. (44) 47
- Kumar, S., see Yuan, Z.-X. (45) 1
- Landrum, P.F., see Fisher, S.W. (45) 115
- Larsson, D.G.J., Adolfsson-Erici, M., Parkkonen, J., Pettersson, M., Berg, A.H., Olsson, P.-E. and Förlin, L., Ethinylloestradiol — an undesired fish contraceptive? (45) 91
- Lauth, J., see DeLorenzo, M.E. (46) 241
- Lee, K.L., see Nadig, S.G. (43) 163
- Lee, L.E.J., see Clemons, J.H. (43) 179
- Lee, Y.-P., see Ploch, S.A. (46) 231
- Lemée, R., see Amade, P. (43) 287
- Leonzio, C., see Canesi, L. (46) 67
- Levine, S.L. and Oris, J.T., CYP1A expression in liver and gill of rainbow trout following water-borne exposure: implications for biomarker determination (46) 279
- Lien, G.J., see McKim, J.M. (45) 265
- Liess, M., see Schulz, R. (46) 155
- Liewenborg, B., see Ericson, G. (45) 181
- Li, J., Quabius, E.S., Wendelaar Bonga, S.E., Flik, G. and Lock, R.A.C., Effects of water-borne copper on branchial chloride cells and Na^+/K^+ -ATPase activities in Mozambique tilapia (*Oreochromis mossambicus*) (43) 1
- Lilius, H., see Råbergh, C.M.I. (46) 55
- Lindesjö, E., see Ericson, G. (45) 181
- Lindström-Seppä, P., see Huuskonen, S.E. (44) 47
- Lipton, J., see Marr, J.C.A. (43) 225
- Lock, R.A.C., see Li, J. (43) 1
- Lotufo, G.R., Bioaccumulation of sediment-associated fluoranthene in benthic copepods: uptake, elimination and biotransformation (44) 1
- Lotufo, G.R., Lethal and sublethal toxicity of sediment-associated fluoranthene to benthic copepods: application of the critical-body-residue approach (44) 17
- Lucan-Bouché, M.-L., Biagianti-Risbourg, S., Arzac, F. and Vernet, G., An original decontamination process developed by the aquatic oligochaete *Tubifex tubifex* exposed to copper and lead (45) 9
- Lydersen, C., see Wolkers, J. (44) 103
- Maage, A., see Berntssen, M.H.G. (46) 87
- Macdonald, J.A., see Miller, H.C. (44) 183
- MacLean, E., see Ploch, S.A. (46) 231
- Marr, J.C.A., Hansen, J.A., Meyer, J.S., Cacela, D., Podrabsky, T., Lipton, J. and Bergman, H.L., Toxicity of cobalt and copper to rainbow trout: application of a mechanistic model for predicting survival (43) 225
- Martín, M., see Hernández, C. (45) 195
- Mattson, M., Raunio, H., Pelkonen, O. and Helle, E., Elevated levels of cytochrome P4501A (CYP1A) in ringed seals from the Baltic Sea (43) 41
- Mayer, P., see Urrestarazu Ramos, E. (46) 1
- McDonald, D.G., see Hollis, L. (46) 101
- McElroy, A.E., see Elskus, A.A. (45) 99
- McGeer, J.C., see Hollis, L. (46) 101
- McKim, J.M., Kolanczyk, R.C., Lien, G.J. and Hoffman, A.D., Dynamics of renal excretion of phenol and major metabolites in the rainbow trout (*Oncorhynchus mykiss*) (45) 265
- Meador, J.P., Sibley, T.H., Swartzman, G.L. and Taub, F.B., Copper tolerance by the freshwater algal species *Oocystis pusilla* and its ability to alter free-ion copper (44) 69
- Menon, N.N. and Menon, N.R., Uptake of polycyclic aromatic hydrocarbons from suspended oil borne sediments by the marine bivalve *Sunetta scripta* (45) 63
- Menon, N.R., see Menon, N.N. (45) 63
- Metcalf, C.D., see Gray, M.A. (46) 149
- Meyer, J.S., see Marr, J.C.A. (43) 225

- Miller, H.C., Mills, G.N., Bembo, D.G., Macdonald, J.A. and Evans, C.W., Induction of cytochrome P4501A (CYP1A) in *Trematomus bernacchii* as an indicator of environmental pollution in Antarctica: assessment by quantitative RT-PCR (44) 183
- Mills, G.N., see Miller, H.C. (44) 183
- Monosson, E., see Elskus, A.A. (45) 99
- Monshouwer, M., see Wolkers, J. (44) 103
- Mosyagina, M.V., see Zelennikov, O.V. (46) 33
- Muir, D.C.G., see Fisk, A.T. (43) 209
- Munger, C., Hare, L., Craig, A. and Charest, P.-M., Influence of exposure time on the distribution of cadmium within the cladoceran *Ceriodaphnia dubia* (44) 195
- Myers, C.R., see Clemons, J.H. (43) 179
- Nadig, S.G., Lee, K.L. and Adams, S.M., Evaluating alterations of genetic diversity in sunfish populations exposed to contaminants using RAPD assay (43) 163
- Näf, C., see Ericson, G. (45) 181
- Nicolas, J.-M., Vitellogenesis in fish and the effects of polycyclic aromatic hydrocarbon contaminants (45) 77
- Nijmeijer, S.M., see Wolkers, J. (44) 103
- Nikinmaa, M., see Bogdanova, A.Y. (43) 111
- Nimmo, M., see Campbell, H.A. (46) 177
- Nimrod, A.C. and Benson, W.H., Reproduction and development of Japanese medaka following an early life stage exposure to xenoestrogens (44) 141
- Nordstoga, K., see Underdal, B. (46) 269
- Nyström, B. and Blanck, H., Effects of the sulfonylurea herbicide metsulfuron methyl on growth and macromolecular synthesis in the green alga *Selenastrum capricornutum* (43) 25
- Oehlmann, J., Stroben, E., Schulte-Oehlmann, U. and Barbara Bauer, Imposed development in response to TBT pollution in *Hinia incrassata* (Ström, 1768) (Prosobranchia, Stenoglossa) (43) 239
- Ogle, S., see Barron, M.G. (46) 253
- Olsson, P.-E., see Larsson, D.G.J. (45) 91
- Oris, J.T., see Levine, S.L. (46) 279
- Palace, V.P., Brown, S.B., Baron, C.L., Fitzsimons, J., Woodin, B., Stegeman, J.J. and Klaverkamp, J.F., An evaluation of the relationships among oxidative stress, antioxidant vitamins and early mortality syndrome (EMS) of lake trout (*Salvelinus namaycush*) from Lake Ontario (43) 195
- Parkkonen, J., see Larsson, D.G.J. (45) 91
- Pärt, P., see Sandbacka, M. (46) 23
- Pathiratne, A. and George, S.G., Toxicity of malathion to Nile tilapia, *Oreochromis niloticus* and modulation by other environmental contaminants (43) 261
- Pelkonen, O., see Mattson, M. (43) 41
- Pennington, P.L., see DeLorenzo, M.E. (46) 241
- Pereira, C.B., see Thorgaard, G.H. (46) 121
- Pérez, J., see Hernández, C. (45) 195
- Perry, S.F., see Powell, M.D. (43) 13
- Pettersson, M., see Larsson, D.G.J. (45) 91
- Piatkowski, T., see Bentivegna, C.S. (44) 117
- Pipe, R.K., Coles, J.A., Carissan, F.M.M. and Ramanathan, K., Copper induced immunomodulation in the marine mussel, *Mytilus edulis* (46) 43
- Ploch, S.A., Lee, Y.-P., MacLean, E. and Di Giulio, R.T., Oxidative stress in liver of brown bullhead and channel catfish following exposure to *tert*-butyl hydroperoxide (46) 231
- Podrabsky, T., see Barron, M.G. (46) 253; Marr, J.C.A. (43) 225
- Pottinger, T.G., see Knudsen, F.R. (44) 159
- Powell, M.D. and Perry, S.F., Acid–base and ionic fluxes in rainbow trout (*Oncorhynchus mykiss*) during exposure to chloramine-T (43) 13
- Preston, B.L., Cecchine, G. and Snell, T.W., Effects of pentachlorophenol on predator avoidance behavior of the rotifer *Brachionus calyciflorus* (44) 201
- Quabius, E.S., see Li, J. (43) 1
- Råbergh, C.M.I., Lilius, H., Eriksson, J.E. and Isomaa, B., The resin acids dehydroabietic acid and isopimaric acid release calcium from intracellular stores in rainbow trout hepatocytes (46) 55
- Ramanathan, K., see Pipe, R.K. (46) 43
- Rankin, J.C., see Bjerregaard, P. (45) 171
- Raunio, H., see Mattson, M. (43) 41
- Rawn, G.P., see Couillard, C.M. (44) 263
- Reyero, M.I., see Bravo, I. (46) 79
- Ribeyre, F., see Inza, B. (43) 273
- Rice, C.D., see Schlenk, D. (43) 121
- Ricker, R.W., see Barron, M.G. (46) 253
- Ristola, T.E., see Huuskonen, S.E. (44) 47
- Ross, P.E., see DeLorenzo, M.E. (46) 241
- Sandbacka, M., Pärt, P. and Isomaa, B., Gill epithelial cells as tools for toxicity screening—comparison between primary cultures, cells in suspension and epithelia on filters (46) 23

- Scarlett, A., Donkin, P., Fileman, T.W., Evans, S.V. and Donkin, M.E., Risk posed by the antifouling agent Irgarol 1051 to the seagrass, *Zostera marina* (45) 159
- Schlenk, D. and Rice, C.D., Effect of zinc and cadmium treatment on hydrogen peroxide-induced mortality and expression of glutathione and metallothionein in a teleost hepatoma cell line (43) 121
- Schmieder, P., see Kolanczyk, R. (45) 47
- Schulte-Oehlmann, U., see Oehlmann, J. (43) 239
- Schultz, T.W., see Bearden, A.P. (46) 11
- Schulz, R. and Liess, M., A field study of the effects of agriculturally derived insecticide input on stream macroinvertebrate dynamics (46) 155
- Scott, G.I., see DeLorenzo, M.E. (46) 241
- Sheehy, K.M., see Gallagher, E.P. (44) 171
- Shorey, C.D., see Adams, S.M. (44) 93
- Shugart, L.R., see Theodorakis, C.W. (45) 279
- Sibley, T.H., see Meador, J.P. (44) 69
- Sikka, H.C., see Yuan, Z.-X. (45) 1
- Sinks, G.D., see Bearden, A.P. (46) 11
- Skulberg, O.M., see Underdal, B. (46) 269
- Snell, T.W., see Preston, B.L. (44) 201
- Solomon, K.R., see Karrow, N.A. (45) 223
- Spizzo, T., see Kolanczyk, R. (45) 47
- Stabell, O.B., Aanesen, R.T. and Eilertsen, H.C., Toxic peculiarities of the marine alga *Phaeocystis pouchetii* detected by in vivo and in vitro bioassay methods (44) 279
- Stegeman, J.J., see Bainy, A.C.D. (44) 289; Elskus, A.A. (45) 99; Palace, V.P. (43) 195
- Steinberg, C., see Haitzer, M. (45) 147
- Stein, J.E., see Krone, C.A. (45) 209
- Stroben, E., see Oehlmann, J. (43) 239
- Suárez, I., see Hernández, C. (45) 195
- Sumpter, J., see Gimeno, S. (43) 93
- Swartzman, G.L., see Meador, J.P. (44) 69
- Taub, F.B., see Meador, J.P. (44) 69
- Tessier, A., see Craig, A. (44) 255
- Theodorakis, C.W., Elbl, T. and Shugart, L.R., Genetic ecotoxicology IV: survival and DNA strand breakage is dependent on genotype in radionuclide-exposed mosquitofish (45) 279
- Thomas, D.A., see Barber, J.T. (45) 253
- Thorgaard, G.H., Arbogast, D.N., Hendricks, J.D., Pereira, C.B. and Bailey, G.S., Tumor suppression in triploid trout (46) 121
- Tomy, G.T., see Fisk, A.T. (43) 209
- Trainer, V.L. and Baden, D.G., High affinity binding of red tide neurotoxins to marine mammal brain (46) 139
- Traunspurger, W., see Haitzer, M. (45) 147
- Tremblay, L. and Van Der Kraak, G., Use of a series of homologous in vitro and in vivo assays to evaluate the endocrine modulating actions of β -sitosterol in rainbow trout (43) 149
- Tuvikene, A., see Huuskonen, S.E. (44) 47
- Underdal, B., Nordstoga, K. and Skulberg, O.M., Protracted toxic effects caused by saline extracts of *Aphanizomenon flos-aquae* (Cyanophyceae/Cyanobacteria) (46) 269
- Urrestarazu Ramos, E., Vaes, W.H.J., Mayer, P. and Hermens, J.L.M., Algal growth inhibition of *Chlorella pyrenoidosa* by polar narcotic pollutants: toxic cell concentrations and QSAR modeling (46) 1
- Vaes, W.H.J., see Urrestarazu Ramos, E. (46) 1
- van Dam, R.A., Barry, M.J., Ahokas, J.T. and Holdway, D.A., Investigating mechanisms of diethylenetriamine pentaacetic acid toxicity to the cladoceran, *Daphnia carinata* (46) 191
- Van Der Kraak, G., see Tremblay, L. (43) 149
- Vernet, G., see Lucan-Bouché, M.-L. (45) 9
- Viarengo, A., see Canesi, L. (46) 67
- Weis, J.S., see Zhou, T. (43) 131
- Wendelaar Bonga, S.E., see Berntssen, M.H.G. (46) 87; Li, J. (43) 1
- Whyte, J.J., see Karrow, N.A. (45) 223
- Williams, P.J., see Couillard, C.M. (44) 263
- Witkamp, R.F., see Wolkers, J. (44) 103
- Wolkers, J., Witkamp, R.F., Nijmeijer, S.M., Burkow, I.C., de Groene, E.M., Lydersen, C., Dahle, S. and Monshouwer, M., Phase I and phase II enzyme activities in Ringed seals (*Phoca hispida*): characterization of hepatic cytochrome P450 by activity patterns, inhibition studies, mRNA analyses, and western blotting (44) 103
- Woltering, D.S., see Elskus, A.A. (45) 99
- Wood, C.M., see Hollis, L. (46) 101
- Woodin, B.R., see Bainy, A.C.D. (44) 289; Palace, V.P. (43) 195
- Yatsu, L.Y., see Barber, J.T. (45) 253
- Yuan, Z.-X., Honey, S.A., Kumar, S. and Sikka, H.C., Comparative metabolism of dibenzo[a,l]pyrene by liver microsomes from rainbow trout and rats (45) 1

- Zelennikov, O.V., Mosyagina, M.V. and Fedorov, K.E., Oogenesis inhibition, plasma steroid levels, and morphometric changes in the hypophysis in Russian sturgeon (*Acipenser gueldenstaedti* Brandt) exposed to low environmental pH (46) 33
- Zhou, T. and Weis, J.S., Swimming behavior and predator avoidance in three populations of *Fundulus heteroclitus* larvae after embryonic and/or larval exposure to methylmercury (43) 131

Keyword Index — volumes 43–46

- Abundance, (46) 155
 Acclimation, (46) 11, 101
 Accumulation, (44) 255; (46) 127
 Acetylcholinesterase, (43) 261
 Acidification, (46) 33
 Adaptation, (45) 9
 Algae, (43) 25; (44) 279; (46) 1, 221
 Algal metabolism, (44) 69
 Alkylphenol, (43) 77, 93
 Allometry, (44) 245
 Anaesthetics, (44) 279
 Androgen receptor, (44) 159
 Anilines, (46) 1
 Antarctica, (44) 183
 Aphanizomenon, (46) 269
 Apoptosis, (46) 87
 Aquatic invertebrates, (45) 241
 Arctic charr, (44) 233
 ARODs, (44) 289
 Aromatics, (46) 253
 Arsenic species, (46) 221
 Artificial stream, (45) 241
 Associated bacteria, (45) 19
 Atlantic salmon (*Salmo salar*), (46) 87
 Atlantic tomcod, (44) 263
 Atrazine, (46) 241
 Autoradiography, (44) 195

 Baltic Sea, (43) 41
 Benzo[a]pyrene, (46) 279
 Benzo[a]pyrene, (45) 147
 Benzo[a]pyrene, (45) 1
 Billings reservoir, (44) 289
 Binary combinations, (43) 179
 Bioaccumulation, (43) 273; (44) 1, 195; (45) 63
 Bioactivation, (45) 47
 Bioconcentration, (45) 147, 159
 Bioindicator, (44) 93
 Biomagnification, (43) 209
 Biomarkers, (44) 233
 Biomonitoring, (43) 239
 Biotransformation, (45) 209

 Blood cell, (46) 43
 Branchial chloride cells, (43) 1
 Brevetoxin, (46) 139
 Broncho-interstitial lesions, (46) 269
 Brown bullhead (*Ameriurus nebulosus*), (46) 231

 Cadmium, (43) 273; (44) 195, 245, 255; (46) 101
Caenorhabditis elegans, (45) 147
 Calcein-AM, (46) 23
 Calcium, (44) 195, 255
 Calcium channel, (44) 255
 Cancer, (46) 121
 Carboxylesterase, (43) 261
 Carp, (45) 195
 Catalytic activities, (44) 103
Caulerpa taxifolia, (43) 287
 Caulerpenyne, (43) 287
¹⁰⁹Cd, (46) 101
 cDNA, (44) 171
Ceriodaphnia, (44) 195
 Channel catfish (*Ictalurus punctatus*), (46) 231
 Chemical defence, (43) 287
Chironomus, (44) 255
 Chloramine-T, (43) 13
 Chlorinated paraffins, (43) 209
 Cholesterol, (43) 149
 Clams, (45) 63
 Cobalt, (43) 225
 Contaminants, (43) 163
 Contamination, (45) 63
 Copepod, (44) 1, 17
 Copper, (43) 225; (44) 31, 69; (45) 9; (46) 43, 87, 191
Corbicula, (43) 273
Corophium volutator, (44) 31
 Cortisol receptor, (44) 159
 Creosote, (45) 181
 Critical body residue, (44) 17
 Critical body residues, (45) 115
 Cu ATPase, (46) 177
 Cu transport, (46) 177
 Cu uptake kinetics, (46) 177
 Cyanotoxins, (46) 269

- CYP1A, (45) 99; (46) 279
CYP1A, (44) 183
CYP1A, (43) 41; (44) 47
CYP forms, (44) 289
Cytochrome P450, (44) 103, 183, 289; (45) 99
Cytochrome P-450, (43) 261
- Daphnia*, (44) 245
Daphnia carinata, (46) 191
Decontamination, (45) 9
Deoxyhemocyanin, (45) 35
Depth, (43) 287
Depuration, (43) 273
Development, (44) 117
DHAA, (43) 111
Dibenzo[a,l]pyrene, (45) 1
Diet, (46) 87
Dietary accumulation, (43) 209
DNA adducts, (45) 181
DNA damage, (45) 279
DOM, (45) 147
Dose response effects, (46) 211
Drift, (46) 155
DTPA toxicity, (46) 191
Duckweed, (45) 253
- Early gamete contacts, (44) 213
Electrochemical detection, (45) 47
Elimination, (46) 127
Embryolarval toxicity, (46) 149
Emergence, (46) 155
EMS, (43) 195, 195
Endocrine disruption, (43) 77, 93
Endocrine disruptors, (44) 159; (45) 91
Environmental hormones, (45) 91
Enzyme induction, (43) 261
Erythrocyte, (43) 111
Estradiol, (44) 141; (45) 91, 127
17 β -estradiol, (43) 77, 93
Estradiol receptor, (44) 159
Estrogen, (45) 91
Estrogenic effect, (45) 77
Estrogenicity, (43) 77, 93
Estrogen receptor, (43) 149
Ethylene glycol, (45) 253
Experimental approach, (43) 273
- Fenvalerate, (46) 155
Fertilization current, (44) 213
Field studies, (46) 155
Filter inserts, (46) 23
Fish, (44) 263; (45) 77, 181; (46) 55
Fish embryo, (44) 117
Fish populations, (43) 163
- Flounder, (44) 171
Flounder males, (46) 211
Flow-through, (45) 241
Fluoranthene, (44) 1
Fluorescence, (45) 159
Fly bioassay, (44) 279
Food uptake, (44) 245
Free amino acid, (44) 129
Freshwater, (44) 93
- Galician coast, (46) 79
Gambusia, (45) 279
Gametogenesis, (46) 33
Gastropod toxicity, (46) 79
Genetic diversity, (43) 163
Gill, (43) 13; (46) 279
Gill binding, (46) 101
Gill damage, (45) 19
Gill epithelial cells, (46) 23
Glial fibrillary acidic protein, (45) 195
Glomerular filtration rate, (45) 265
Glutamine synthetase, (45) 195
 γ -Glutamyl-cysteine synthetase, (46) 67
Glutathione, (46) 67
Glutathione S-transferase, (43) 261
Glutathione S-transferases, (44) 171
Granules, (44) 93
Growth, (44) 31
Growth inhibition, (43) 25
GSH transferase, (46) 67
- Haemolysis, (44) 279
Half-life, (43) 209
Haliotis tuberculata, (46) 79
Harmful phytoplankton, (45) 19
Heat-shock proteins, (45) 195
Heavy metals, (44) 47; (46) 67
Hemocyanin oxygen affinity, (45) 35
Hemolymph, (46) 43
Hemolymph electrolyte, (44) 129
Hepatocarcinogenesis, (45) 127
Hepatocyte, (43) 149; (46) 55
Hepatocytic damage, (46) 269
Heterosigma, (45) 19
 β -Hexachlorocyclohexane, (45) 127
Hinia incrassata, (43) 239
Histology, (44) 195
Histopathologic biomarker, (44) 263
Histopathology, (46) 269
Hormesis, (44) 69
Hydraulics, (46) 155
Hydrodynamic voltammograms, (45) 47
4-Hydroxyanisole, (45) 47
8-Hydroxydeoxyguanosine, (46) 231

- Hyperammonemia, (45) 195
- Hypophysis, (46) 33
- Immunocompetence, (46) 43
- Immunohistochemistry, (45) 99
- Immunotoxicity, (45) 223
- Imposex, (43) 239
- Indoor microcosms, (43) 273
- Induction, (46) 279
- Inhibition, (44) 103
- Inorganic mercury, (43) 273; (45) 171
- Insect, (44) 255
- Insecticide toxicity, (43) 261
- Insects, (46) 155
- Interaction, (45) 171
- Interactions, (43) 179
- Intersex gonad, (43) 93
- Intestine, (46) 87
- Intracellular calcium, (46) 55
- Ionic channels, (44) 213
- Ionic fluxes, (43) 13
- Irgarol, (45) 159
- Iron, (46) 191
- Japanese medaka, (46) 149
- Kidney, (43) 13
- Killifish, (45) 99
- Lake trout, (43) 195, 195
- Lamprey, (43) 111
- Larvae, (43) 131; (45) 99
- Lead, (45) 9
- Lemna*, (45) 253
- Life history, (44) 31
- Lipid content, (44) 1
- lipid peroxidation, (46) 231
- Liver, (44) 171; (46) 55
- Liver cell lines, (43) 179
- Liver microsomes, (45) 1
- Lumbriculus variegatus*, (45) 115
- Macroinvertebrates, (46) 155
- Macromolecules, (43) 25
- Malathion toxicity, (43) 261
- Manganese, (46) 127, 191
- Marine flatfish, (45) 209
- Marine mammal, (46) 139
- Mauthner cell, (43) 51
- Mechanism of toxicity, (44) 117
- Mechanistic model, (43) 225
- Medaka, (43) 51; (44) 141; (45) 127
- Mesocosm, (46) 241
- Messenger RNA, (44) 171
- Metabolic acid-base fluxes, (43) 13
- Metabolism, (45) 1, 47, 209, 253
- Metal, (44) 195, 255
- Metal bioavailability, (43) 273
- Metallothionein, (43) 121; (46) 87
- Metals, (44) 93
- Methoxychlor, (44) 141
- Methylmercury, (43) 131, 273
- Microbial food web, (46) 241
- Microcosm, (45) 223
- Midge, (44) 47
- Modelling, (46) 101
- Mozambique tilapia, (43) 1
- Mussel, (46) 43, 67
- Mussels, (44) 93
- Mysids, (46) 253
- Mytilus edulis*, (46) 43
- Narcosis, (45) 115
- Nephrops norvegicus*, (46) 127
- Neurotoxicity, (43) 51
- Nitrite, (44) 129; (45) 35
- Nitrobenzenes, (46) 1
- Nonylphenol, (44) 141; (46) 211
- Northern blot, (44) 103
- Nutritional status, (44) 233
- Octylphenol, (46) 149
- Oil, (46) 253
- Oncorhynchus mykiss*, (45) 223; (46) 55, 121
- Oocystis, (44) 69
- Oreochromis mossambicus*, (43) 1
- Organic mercury, (45) 171
- Oxidative damage, (43) 121
- Oxidative stress, (43) 195, 195
- Oxyhemocyanin, (45) 35
- PAH, (44) 1, 17; (45) 147; (46) 253
- PAHs, (44) 47; (45) 181
- Parathion-ethyl, (46) 155
- PCB, (44) 233
- PCBs, (45) 115
- PCNA, (46) 87
- Penaeus japonicus*, (44) 129
- Penaeus monodon*, (45) 35
- Pentachlorophenol, (44) 201
- Perfused gill, (46) 177
- Pesticides, (46) 155
- pH, (43) 111
- Phaeocystis pouchetii*, (44) 279
- Phagocytosis, (46) 43
- Phenol metabolites, (45) 265
- Phenols, (46) 1
- Phoca hispida*, (43) 41

- Photosynthesis, (45) 159; (46) 221
Phycotoxins, (44) 279
PLHC-1, (44) 47
PLHC-1 cells, (43) 121
Polar narcosis, (46) 1
Pollution, (44) 183; (45) 9
Polychlorinated alkanes, (43) 209
Polychlorinated biphenyls (PCBs), (43) 179
Polycyclic aromatic hydrocarbons, (45) 77
Polycyclic aromatic hydrocarbons (PAH), (45) 63
Polycyclic aromatic hydrocarbons (PAHs), (45) 223
Population, (44) 31
Population genetics, (45) 279
Population growth kinetics membrane fatty acids, (46) 11
³²P-postlabelling, (45) 181
Predation, (43) 51
Predation defense, (44) 201
Predator avoidance, (43) 131
Primary culture, (46) 23
Prosobranch snails, (43) 239
Protection, (43) 121
Protracted toxic effects, (46) 269
Prymnesiophyceae, (44) 279
PSP toxicity, (46) 79
Pulp and paper, (44) 263
Pulp and paper mill effluent, (46) 55

Quantification, (43) 287
Quantitative structure-activity relationships, (46) 1

Radiation, (45) 279
Rainbow trout, (43) 13, 179, 209, 225; (44) 159; (45) 265; (46) 23, 101, 279
Rainbow trout hepatocytes, (44) 83
Rainbow trout (*Oncorhynchus mykiss*), (45) 171; (46) 177
RAPD assay, (43) 163
Rat, (43) 179; (45) 1
Receptor binding, (46) 139
Red tides, (46) 139
Renal clearance, (45) 265
Reproduction, (43) 239; (44) 31; (45) 91
Reproductive system, (46) 33
Reproductive toxicity, (44) 141
Resin acid, (46) 55
Resin acids, (43) 111
Resistance, (45) 99
Ringed seal, (44) 103
RNA:DNA, (46) 211
Rotifer, (44) 201
RT-PCR, (44) 183

Russian sturgeon, (46) 33

Salmonids, (45) 19
Saxitoxin, (46) 139
Seasonal, (43) 287
Sediment, (44) 1, 17, 47
Sediment load, (45) 63
Selenium, (45) 171
Sexual differentiation, (43) 77
Shasta rainbow trout, (45) 1
Short-term toxicity, (43) 25
 β -sitosterol, (43) 149
Sodium channel, (46) 139
Sole, (44) 171
Spermatogenesis, (43) 93
Startle response, (43) 51
Steroidogenesis, (46) 33
Streams, (46) 155
Stress, (46) 155
Sublethal, (44) 17
Sublethal effects, (46) 101
Sublethal endpoints, (45) 115
Sulfonylurea, (43) 25
Survival, (43) 225; (45) 279
Suspension, (46) 23
Svalbard, (43) 41
Swimming behavior, (43) 131; (44) 201
Swimming velocity, (44) 245
Synergism, (44) 159

TBT, (44) 213; (45) 209
TBT pollution, (43) 239
tert-Butyl hydroperoxide, (46) 231
Test methods, (45) 241
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin (TCDD), (43) 179
Tetrahymena pyriformis, (46) 11
Tidal creek, (46) 241
Tilapia, (43) 261; (44) 289
Tolerance, (46) 221
Toxic cell concentrations, (46) 1
Toxicity, (43) 225, 287; (44) 17, 47, 69; (45) 241, 253; (46) 221, 253
Trematomus bernacchii, (44) 183
Triazine, (45) 159
Tributyltin, (44) 117; (45) 209
Triploid, (46) 121
Trout, (46) 121
Tubifex tubifex, (45) 9
Tumor, (46) 121
Tumor promotion, (45) 127

Uptake, (44) 255
Urea, (44) 129

- | | |
|---------------------------------------------------|-------------------------|
| Vitellogenesis, (45) 77 | Western blot, (44) 103 |
| Vitellogenin, (43) 77, 93, 149; (44) 83; (46) 211 | Xenoestrogens, (44) 141 |
| Wastewater, (44) 83 | XRMA, (44) 93 |
| Water-borne copper, (43) 1 | Zinc, (46) 191 |
| Water content, (44) 129 | Zostera, (45) 159 |
| Water quality, (45) 91 | |

